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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,189

10/06/2005

Anthony John Barnes

SHP-PT075.1

8376

3624 7590 10/08/2008

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EXAMINER

ABOAGYE, MICHAEL

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

10/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,189	Applicant(s) BARNES, ANTHONY JOHN	
	Examiner MICHAEL ABOAGYE	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/06/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosen et al. (US Patent no. 5,971,252).

Regarding claims 14 and 15, Rosen et al. teaches a blank comprising a parent body (item 32, figure 3c) and an insert (item 36, figure 3c) joined thereto by means of friction stir welding (abstract and column 3, lines 22-35), at least one of the parent body and the insert being made of a material which has superplastic properties (Note, Rosen et al. teaches joining aluminum alloys of the 700 series which are capable of undergoing superplastic forming (see, column 3, lines 36-44).

Regarding claims 16-26, Rosen et al. teaches a parent body in a form of a sheet; an insert of the same thickness as the parent body; an insert of a different thickness to the parent body; an insert which has a thickness greater than that of the parent body; an insert which has a thickness which is less than that of the parent body; wherein one or both surfaces of the insert are contoured (see, column 4, lines 5-10); wherein the thickness of the insert in the region of the joint line with the parent body is the same as that of the parent body (Note, in column 4, lines 5-15, Rosen et al. teaches, a filler or an

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insert contoured generally to the length, width and depth of the cut-out or trough in the parent body or metal, Rosen et al. also teaches the insert may not necessarily be shaped or machined precisely the same as the cut-out in the parent material, also see, item 34, figure 3c. The examiner interprets this to mean that, there can be variation in configuration of the insert and the cut-out in the parent body, where configuration may include shape, thickness and the like. Therefore, Rosen et al. teaching meets the thickness limitations); wherein the insert comprises that part of the blank which has superplastic properties; wherein material of the parent body also has superplastic properties, but to a lesser extent than those of the insert (Note, Rosen et al. in column 3, lines 1-15 and column 4, lines 4-10, teaches an insert material of same composition or compatible with the parent metal. The examiner interprets said material compatibility to imply either the insert is of higher or lesser superplastic properties than the parent metal); wherein the insert has a 3D shape which is preformed (Note figure 3c shows the insert and the parent body in 3D configuration). Regarding claim 25, said insert after welding to the parent body, plugs the crack and therefore should inherently reinforce the parent body, thus said insert carry's out a mechanical function.

3. Claims 14-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Forrest et al. (US Patent No. 6398883).

Forrest et al. teaches a blank comprising a parent body (51, figures 14A-14C) and an insert (51a, figures 14A-14C) joined thereto by means of friction stir welding, at least one of the parent body and the insert being made of a material which has

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superplastic properties (Note, Forrest et al. teaches a plurality of material which are superplastic forming, see, column 1, line 65-column 2, line 11 and column 5, lines 41-62); wherein said structure member 51 includes a milled recess or aperture (note said milled recess or aperture is the same as a cut-out) having a dimension that corresponds to the dimensions of the insert 51a so that said insert can be slipped or press fit to the structural member prior to welding (see, column 11, lines 30-40 and figure 14A). Forrest et al. also teaches said insert and said structural member being of either of the same material or of different materials (see, column 11, lines 30-40). Forrest et al. also teaches joining a plurality of inserts to the structural member (see, column 11, lines 27-30) (Notes this specific teaching of Forrest et al. meets the limitations calling for multiple inserts set forth in claims 27 and 28. Note also that Forrest et al. teaches selecting the insert and the structural member either of the same or different material to make, therefore the plurality of the inserts could also be either of the same material or different superplastic materials). Forrest et al. in figures 14A shows an insert 51a of the same thickness as the structural member 51; figure 14B showing an insert of different thickness; wherein said inserts of both Figures 14A and 14B are three dimensional in shape. In figure 14C both the recess or the cut-out and the insert show a contoured surface. Note also that both the insert and the structural member can be described as sheets or planar in profile. Regarding claim 25, said insert after welding to the parent body, plugs the crack and therefore should inherently reinforces the parent body, thus said insert carries out a mechanical function.

Response to Arguments

4. The examiner acknowledges the applicants' amendment received by USPTO on June 18, 2008. Claims 1-13 have been withdrawn, therefore claims 14-28 are under consideration in the application.

Applicant's arguments with respect to Colligan reference have been considered but are moot, since said reference has been withdrawn from the instant rejection.

Applicant's arguments filed with respect to Rosen et al. reference have been fully considered but they are not persuasive. Applicant argues that Rosen fails to teach that the parent body or the insert is made of a material which exhibits superplastic properties. The examiner disagrees. Rosen et al. teaches both parent member and an insert made of aluminum alloys and specifically make reference to 7000 series aluminum alloys, which exhibit superplastic properties (see, Rosen et al. abstract, and column 3, lines 35-45). Further arguments/remarks filed by the applicant regarding grain size association with superplastic behavior of the workpieces (insert and structural member) are not pertinent because they are not recited in the claims. It is also noted that, the applicant in his own admission cites the 7000 series, alloys of aluminum as exhibiting superplastic behavior (see, applicant's specification, paragraphs [0064] and [0084]). The rejections of claims 14-26 by Rosen et al. reference will therefore remain.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL ABOAGYE whose telephone number is (571)272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Aboagye/
Assistant Examiner,
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/Kevin P. Kerns/
Primary Examiner, Art Unit 1793